

## **REGULATION III - CONTROL OF AIR CONTAMINANTS**

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**MARICOPA COUNTY  
AIR POLLUTION CONTROL REGULATIONS**

**REGULATION III - CONTROL OF AIR CONTAMINANTS**

**RULE 330  
VOLATILE ORGANIC COMPOUNDS**

**SECTION 100 - GENERAL**

- 101 PURPOSE:** To limit emissions of volatile organic compounds into the atmosphere that may result from the use of organic solvents or processes that emit volatile organic compounds.

**SECTION 200 - DEFINITIONS:** For the purpose of this rule, the following definitions shall apply:

- 201 DAY** - A period of 24 consecutive hours beginning at midnight.
- 202 NON-COMPLYING SOLVENT** - A solvent which exceeds the applicable percentage composition limit for any of the four chemical groupings listed below.
- 202.1** Group I: One or more of the following families of compounds having the olefinic or cyclo-olefinic type of unsaturation – hydrocarbons, alcohols, aldehydes, esters, ethers, and/or ketones; except perchloroethylene: 5 percent by volume.
- 202.2** Group II: One or more aromatic compounds having eight or more carbon atoms to the molecule except ethylbenzene, methyl benzoate, and phenyl acetate: 8 percent by volume.
- 202.3** Group III: One or more of the following compounds and compound types – ketones having a branched hydrocarbon structure, ethylbenzene, trichloroethylene, and/or toluene: 20 percent by volume.
- 202.4** An aggregate of any combination of the above three groups: 20 percent by volume.
- 202.5** Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the above groups of

organic compounds, it shall be considered a member of the most reactive chemical group that it can be classified into, that is, that group having the lowest percentage composition limit.

- 203 NON-PRECURSOR ORGANIC COMPOUND** - Any of the following organic compounds which have been designated by the EPA as having negligible photochemical reactivity: methane; ethane; methylene chloride (dichloromethane); 1,1,1-trichloroethane; trichlorofluoromethane (CFC-11); dichlorodifluoromethane (CFC-12); chlorodifluoromethane (CFC-22); 1,1,2-trichlorotrifluoroethane (CFC-113); 1,2-dichlorotetrafluoroethane (CFC-114); chloropentafluoroethane (CFC-115); trifluoromethane (FC-23); 2,2-dichloro-1,1,1-trifluoroethane (HCFC-123); 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124); 1,1-dichloro-1-fluoroethane (HCFC-141b); 1-chloro-1,1-difluoroethane (HCFC-142b); pentafluoroethane (HFC-125); 1,1,2,2-tetrafluoroethane (HFC-134); 1,1,1,2-tetrafluoroethane (HFC-134a); 1,1,1-trifluoroethane (HFC-143a); 1,1-difluoroethane (HFC-152a); all completely fluorinated, completely saturated: alkanes, ethers and tertiary amines.
- 204 ORGANIC COMPOUND** - Any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, carbonates, and metallic carbides.
- 205 ORGANIC SOLVENT** - Any organic compound which is liquid at actual conditions of use or storage and which is used as a diluent, thinner, dissolver, viscosity reducer, extractant, cleaning agent or is a reactant or product in a manufacturing process.
- 206 VOLATILE ORGANIC COMPOUND (VOC)** - Any organic compound except non-precursor organic compounds.

## **SECTION 300 - STANDARDS**

- 301 LIMITATIONS - OPERATIONS INVOLVING HEAT:** No person shall discharge more than 15 pounds (6.8 kg) of volatile organic compounds into the atmosphere in any one day from any machine, equipment, device, or other article in which any volatile organic compound or any material containing a volatile organic compound comes into contact with flame or is evaporated at temperatures exceeding 200°F (93.3°C), in the presence of oxygen, unless the entire amount of such discharge has been reduced in accordance with Section 304 of this rule.

- 302 LIMITATIONS - NON-COMPLYING SOLVENTS:** Excluding emissions subject to Section 301 above, no person shall discharge more than 40 pounds (18 kg) of volatile organic compounds into the atmosphere in any one day from any machine, equipment, device or other article for employing, applying, evaporating or drying any non-complying solvent (as defined in Section 202 of this rule) or material containing such non-complying solvent, unless the entire amount of such discharge has been reduced in accordance with Section 304 of this rule.
- 303 LIMITATIONS - PROCESS LINES:** Emissions of VOCs from any series of machines, equipment, devices or other articles which are designed for processing any item including but not limited to continuous web(s), strip(s), or wire(s) and which use operations described in Sections 301 and/or 302 of this rule shall be collectively subject to the limitations of and compliance with those sections.
- 304 REDUCTIONS REQUIRED:** Emission to the atmosphere of volatile organic compounds requiring control pursuant to Section 301 or 302 of this rule shall be reduced by at least one of the following methods:
- 304.1** Incineration, provided that 90 percent or more of the carbon in the volatile organic compounds entering the incineration device is oxidized to carbon dioxide and overall control efficiency (capture plus processing) is at least 85 percent by weight; or
  - 304.2** Adsorption, provided that overall control efficiency (capture plus processing) is at least 85 percent by weight; or
  - 304.3** Using low VOC material containing no more than 20 percent VOC by volume (as determined by the applicable test method(s) and excluding non-precursor organic compounds and water), provided that no VOC from the material comes into contact with flame; or
  - 304.4** Processing in a manner not less effective than in subsection 304.1 or 304.2 of this rule and verified by test methods of this rule.
  - 304.5** The owner or operator using an emissions control device to reduce emissions in accordance with this section shall provide the Control Officer with an Operation and Maintenance (O&M) Plan. This plan shall specify key system operating parameters, such as temperatures, pressures and/or flow rates, necessary to determine compliance with this rule and describe in detail procedures to maintain the approved emission control system. The Control Officer's written approval of this plan shall be required for compliance with this rule to be achieved.

- 305 EQUIPMENT CLEANUP:** A person shall not use any liquid materials containing more than 10 percent volatile organic compounds for the cleanup of equipment unless:
- 305.1** The used cleaning liquids are collected in a container which is closed when not in use and is disposed of in a manner such that volatile organic compounds are not emitted into the atmosphere, or
  - 305.2** The equipment is disassembled and cleaned in a solvent vat which is closed when not in use, or cleaning is done by other methods, approved in writing by the Control Officer, which limit evaporation.
- 306 VOC CONTAINMENT AND DISPOSAL:** No person shall store, discard, or dispose of VOC or VOC-containing material in a way intended to cause or to allow the evaporation of VOC to the atmosphere. Reasonable measures shall be taken to prevent such evaporation which include but are not limited to the following:
- 306.1** All materials from which VOC can evaporate, including fresh solvent, waste solvent and solvent-soaked rags and residues, shall be stored in closed containers when not in use; and
  - 306.2** Such containers one gallon and larger shall be legibly labeled with their contents; and
  - 306.3** Records of the disposal/recovery of such materials shall be kept. Records of hazardous waste disposal shall be kept in accordance with hazardous waste disposal statutes.
- 307 EXEMPTIONS:** The provisions of this rule shall not apply to:
- 307.1** Organic solvent manufacturing facilities and the overland transport of organic solvents and materials containing VOC.
  - 307.2** The use of equipment, materials, and/or substances which meet applicable requirements and standards specified by other rules of Regulation III.
  - 307.3** The spraying or other employment of insecticides, pesticides or herbicides.
  - 307.4** Foundries; smelters; melting or roasting of metal, ore, or dross; all operations included under Standard Industrial Classification codes 3312, 3313, 332, 333, 334, 336, and 3398; and all on-site mold making activities at such operations and industries.

## **SECTION 400 - ADMINISTRATIVE REQUIREMENTS**

- 401 COMPLIANCE SCHEDULE:** Any person employing a control device as of September 21, 1992, to meet the emissions reductions requirement of this rule shall by November 20, 1992, file an Operation and Maintenance Plan with the Control Officer pursuant to Section 501 of this rule.

## **SECTION 500 - MONITORING AND RECORDS**

- 501 PROVIDING AND MAINTAINING MONITORING DEVICES:** Any person incinerating, adsorbing, or otherwise processing organic materials pursuant to this rule shall provide, properly install and maintain in calibration, in good working order and in operation, devices specified in the Operation and Maintenance Plan as well as in either the Permit to Operate or the Installation Permit for indicating temperatures, pressures, rates of flow, or other operating conditions necessary to determine if air pollution control equipment is functioning properly and is properly maintained.
- 502 DETERMINATION OF COMPLIANCE:** Determination of the organic solvent content and composition of a solvent or material shall be made as of the time that the solvent or material is in its final form for application or employment, notwithstanding any prior blending, reducing, thinning or other preparation for application or employment. Emissions resulting from air or heat drying of products for the first 12 hours after the removal from any machine, equipment, device or other article shall be included in determining compliance with this rule.
- 503 RECORDKEEPING AND REPORTING:** Any person subject to this rule shall comply with the following requirements. Records shall be retained for five years and shall be made available to the Control Officer upon request.
- 503.1 Current List:** Maintain a current list of coatings, adhesives, makeup solvents, and any other VOC-containing materials; state the VOC content of each in pounds per gallon or grams per liter. VOC content shall be expressed less water and non-precursor compounds for materials which are not used for cleaning or cleanup.
- 503.2 Monthly Usage Records:** Maintain monthly records of the amount of each coating; adhesive; makeup solvent; solvent used for surface preparation, for cleanup, and for the removal of materials; and any other VOC-containing material used. Identify any materials subject to the emission limits in Section 301 or Section 302 and keep separate totals for these materials.

**503.3 Operation and Maintenance:** Maintain a continuous record of the times an approved emission control device is used to comply with this rule. Maintain daily records of the O&M Plan's key system operating parameters. Account for any periods of operation when the control device was not operating. Maintain records of all maintenance performed according to the O&M Plan.

**503.4 Discarded Materials:** Maintain records of the type, amount, and method of disposing of VOC-containing materials on each day of disposal.

**504 TEST METHODS:**

**504.1** Measurement of VOC content of materials shall be conducted and reported in accordance with EPA Test Method 24 (40 CFR 60, Appendix A).

**504.2** The non-complying organic compound content shall be determined using the ASTM Standard Recommended Practices for General Gas Chromatography Procedures, E 260-85; General Techniques of Infrared Quantitative Analysis, E 168-67; or General Techniques of Ultraviolet Quantitative Analysis, E 169-87.

**504.3** Measurements of the water and exempt solvent vapor content shall be conducted in accordance with ASTM Test Methods D 4457-85 and D 3792-86.

**504.4** Measurement of VOC emissions subject to this rule shall be conducted in accordance with EPA Test Method 18 and/or by EPA Method 25 or an applicable submethod of Method 25 (40 CFR 60, Appendix A), in combination with the appropriate capture efficiency method.

**504.5** Capture/control efficiency shall be determined by mass balance in combination with ventilation/draft rate determinations or by "Using a Temporary Total Enclosure for Capture Efficiency Testing", EPA-450/4-91-020.

**504.6** Ventilation/draft rates shall be determined by EPA Methods 2, 2a, 2c, and 2d.

**504.7** Temperature measurements shall be done with an instrument with an accuracy and precision of less than one-half degree Fahrenheit (0.25°C) for temperatures up to 480°F (250°C). Higher temperatures shall be determined by instruments no less accurate than 1.0 percent of full scale unless the Control Officer specifies greater accuracy.